

# Contextualizing Adolescent Tobacco Use

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Little is known regarding patterns of tobacco consumption among adolescents as they progress from stages of non-use, initiation, experimentation, and regular use. Even among regular users, little is known about the basic dimensions of adolescent smoking—the who, where, when, and with whom. Selected findings from a 4-year longitudinal study designed to model the influences of situational/contextual and trait factors on the smoking behavior of adolescents in everyday settings will be presented. A second key focus to be discussed is the role of dispositional traits as they interact with situational cues and contexts in the development of tobacco dependence over the critical high school years.

Approximately 420 high school freshmen were enrolled in Project MASH (Monitoring of Adolescent Stress and Health). The study sample was stratified to include regular smokers, experimenters, have tried, and never smokers. Twice during their freshman and twice every year during their sophomore through senior years, these adolescents logged their cigarette consumption, activities, contexts, and moods every 30 (+10) minutes across 4-day intervals that included 2 weekday and 2 weekend days. They also supplied a saliva sample during each recording day. About 250 youth have completed 4 years of diary monitoring (7-8 data collection waves) with another 150 teens now in their third year of data collection. Over the course of the project, these teens have provided approximately 500,000 diary recordings and we have captured about 6,000 individual episodes of cigarette smoking. Environmental, social, and affective contexts were powerful determinants of youth cigarette smoking. Unexpectedly, more cigarettes were smoked in teens' homes than in any other context (27 percent), with 46 percent of these "at home" smoking episodes taking place while alone. Independent of environmental context, a substantial number of cigarettes smoked occurred while with friends (38 percent), boyfriend/girlfriend (12 percent) and family (8 percent). Interestingly, 20 percent of all smoking instances occurred while teens were alone. Mood states were also found to be powerful determinants of smoking. Temporal analyses of mood smoking linkages were conducted using Generalized Estimating Equations. Greater levels of anger, anxiety, sadness, and stress were linked to an increased probability (50 percent to 120 percent) of smoking in the subsequent (30 minutes) diaries. In contrast, greater levels of perceived control were linked to lowered likelihoods of smoking in subsequent diaries. Personality and psychopathology also emerged as important dispositional contexts for smoking. For example, the risks of smoking, urges to smoke, and alcohol intake were elevated in adolescents with depressive and externalizing (aggressive and delinquent) dispositions. ADHD characteristics were also associated with behavioral patterns and contexts that may promote vulnerability to nicotine dependence as well as peer deviancy training and unhealthy lifestyle behaviors more generally. Interestingly, a comparison of the smoking trajectories of ADHD youth who were medicated versus those unmedicated for their condition suggested that pharmacotherapy may serve to protect dysfunctional teens from tobacco use. Overall, the evidence from these studies has supported the hypothesis that there is a core group of individuals who have dispositional characteristics that channel them into smoking careers.

The findings emerging from this project suggest several translations for preventing the initiation of tobacco use. Perhaps prevention programs need to focus on home alone as well as peer contexts. The results also indicate that targeted prevention programs may be more cost-effective than one-size-fits-all approaches. Early training in affect regulation may reduce the appeal of substance use. Finally, effective treatment of childhood disorders such as ADHD may protect against smoking initiation and dependence.